REMARKS/ARGUMENTS

Pending Claims

Claims 1-18 remain pending in the application. Claims 1, 8, 9 and 10 have been amended. No new matter has been added.

Information Disclosure Statement

As for the lack of consideration of JP2003-15931 and JP2002-82775, Applicants refer to the Information Disclosure Statement filed January 28, 2005, in which it is explained that these references have corresponding English language counterparts in U.S. Patent Publication No. 2004/0145538 and U.S. Patent No. 6,752,120, respectively. Accordingly, further consideration of these JP documents is unnecessary since they are cumulative in their disclosure with respect to the U.S. Patent Publication and U.S. Patent equivalents.

Amendments to the Claims

Independent claims 1, 8, 9 and 10 have been amended to clarify the relation between the remote copying of data from the first or second storage system to the third storage system and the migration of data from the first primary volume in the first storage system to the second primary volume in the second storage system. In particular, it is during remote copying of data from the first storage system to the third storage system, that the first storage system starts to migrate data stored in the first primary volume to the second primary volume in the second storage system. Further, as amended, the claims set forth that the first storage system continues to migrate the data and also completes migration of the data stored in the first primary volume

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to the second primary volume during the remote copying of data from the first storage system

or the second storage system to the third storage system. Thus, it is clearly set forth in the

claims that the start of migration of data from the first primary volume to the second primary

volume is started during remote copying and that migration of data from the first primary

volume to the second primary volume continues during the remote copying of data from the

first or second storage system to the third storage system; and the migration of data from the

first primary volume to the second primary volume is completed during the remote copying of

data from the first or second storage system to the third storage system.

The claims as amended are supported by the application as originally filed. In

particular, Figure 1 shows a storage system 2-1 of a local site 1 that has a primary volume V1

that stores data written to by a host 1. Storage system 2-2 has a second primary volume V2 and

migration of data is from V1 to V2. Further, a remote site storage system 2-3 has a secondary

volume V3 and there is remote copying of data from either primary volume V1 or primary

volume V2 to secondary volume V3. As set forth in the Summary of the Invention of the

application, for example, the present invention provides a remote copy system where data

stored in a primary volume for remote copying can be migrated to a new primary volume while

continuing the remote copying. *See*, page 5, lines 5-9 of the specification.

Claims Rejections 35 U.S.C. §103

Claims 1-2, 4-5, 8-13 and 15-16 are rejected under 35 U.S.C. §103(a) as being obvious

over Fujibayashi (of record) in view of Nakano et al., U.S. Published Application

2003/0051111. Claims 3 and 14 are rejected as being obvious over Fujibayashi in view of

Nakano and further in view of Gupta (of record); and claims 6, 7, 17 and 18 are rejected as

being obvious over Fujibayashi in view of Nakano and further in view of Fellin (of record).

Applicants request reconsideration of the rejections for the following reasons.

Fujibayashi discloses a remote copy procedure between a primary storage 102 and a

secondary storage 104. The reference also allows for migration of data between the primary

storage system 102 and a new primary storage system 103. However, Fujibayashi does not

disclose that part of the claimed combination which includes that the first storage system

migrates data stored in the first primary volume to the second primary volume in the second

storage system during remote copying of data from the first or second storage systems to the

third storage system. Nakano is relied upon for disclosing this aspect of the claimed

combination.

In particular, Nakano is relied upon for disclosing in Figures 1 and 9-11 remote copying,

which is termed a data copy monitoring function (see page 9, paragraphs [0144] and [0155] of

Nakano). However, Nakano merely discloses one primary volume, i.e. storage sub-system 1.

Data is copied synchronously to storage subsystem 2 and asynchronously to storage subsystem

3. During a normal operation, the controllers of the storage sub-systems 1, 2 and 3 that do not

directly exchange data manage the differential data between the logical volumes. Thus, the

differential data need only be copied between the storage sub-systems. According to Nakano,

the differential copy need only be copied between the logical volumes (the storage sub-systems

1 and 3) that do not directly relate to the data transfer. If the invention disclosed by Nakano is

not applied in the configuration in FIG. 9, the storage sub-system 1 must fully copy the stored

data to the storage sub-system 3 in FIG. 9. Therefore a large data center would be required

along with an extended period of time for copying, which is to be avoided according to Nakano

(see paragraphs [0180] and [0184]). Therefore, there is no disclosure of migration of data from

one primary volume to another between first and second storage systems during remote

copying from one of the first and second storage systems to a third storage system, which

includes starting the migration of data and completing migration of data, as set forth in the

amended independent claims. Accordingly, the combination of Fujibayashi and Nakano does

not render the invention of the independent claims unpatentable under 35 U.S.C. § 103(a), and

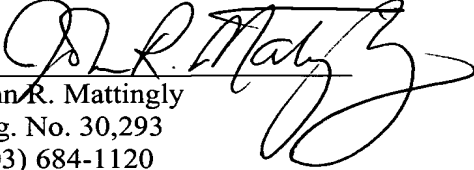therefore the rejection should be withdrawn.

In view of the foregoing reasons, Applicants respectfully assert that the independent

claims are patentable. Further, although the 35 U.S.C. §103 rejection of claims 3 and 14; and

the rejection of claims 6, 7, 17 and 18 rely upon Gupta and Fellin as the tertiary references,

neither of Gupta or Fellin overcome the deficiencies in the Fujibayashi and Nakano

combination. Therefore, 3, 6, 7, 14, 17 and 18 are patentable under 35 U.S.C. § 103(a), at least

since each of these claims are dependent on a base claim asserted to be allowable for the

foregoing reasons. Accordingly, the rejections of claims 3, 6, 7, 14, 17 and 18 under 35 U.S.C.

§ 103(a) should be withdrawn.

CONCLUSION

In view of the foregoing, Applicant respectfully requests that a timely Notice of

Allowance be issued in this case.

Respectfully submitted,

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